

What is claimed is:

1. A method of treating a malignant solid glioma in a human or animal using a multi-modality therapy, the solid glioma defining a parental tumor strain, the therapy comprising the steps of:

- 5 (a) surgically excising cells of the solid glioma;
(b) altering said excised cells by genetic modification to enhance the immunogenicity of the altered cells;
10 (c) subjecting the solid glioma to a radiation therapy method while limiting the radiation dose received concomitantly by contiguous normal tissue to clinically tolerable levels; and
(d) subjecting said human or animal to an immunotherapy composed of introduction of
15 said altered cells into said human or animal using multiple sequenced injections.

2. The treatment method of claim 1 wherein the mass of the solid glioma is at least substantially reduced prior to step (a) using surgical techniques.

20 3. The treatment method of claim 1 wherein the mass of the solid glioma is at least substantially reduced prior to step (a) using radiotherapeutic techniques.

4. The treatment method of claim 1 wherein the mass of the solid glioma is at least substantially reduced prior to step (a) using surgical
25 and radiotherapeutic techniques.

5. The treatment method of claim 1 wherein the radiation dose received by normal tissue adjacent the solid glioma is in the range of 10 - 13 Gy from low-LET radiation or a total of 10 - 13 Gy-Eq from any combination of low-LET and high-LET radiations.

5 6. The treatment method of claim 1 wherein step (b) includes lethally irradiating the cells in vitro to render them incapable of sustained clonogenic growth in vivo.

7. The treatment method of claim 1 wherein step (c) includes subjecting the solid glioma to LINAC radiation.

10 8. The treatment method of claim 1 wherein the altered cells are cultivated to provide a large number of identical, genetically modified cells for use in step (c).

9. The treatment of claim 1 wherein the altered cells of step (b) are mixed in an immunogenic adjuvant suited for injection in step (c).

15 10. The treatment method of claim 1 wherein step (c) is implemented upon completion of step (a).

11. The treatment method of claim 1 wherein the radiation therapy is completed in less than a few hours after completion of step (a).

20 12. The treatment method of claim 1 wherein the radiation therapy is completed in less than a few days after completion of step (a).

13. The treatment method of claim 1 wherein the radiation therapy is completed within fewer than ten weeks after completion of step (a).

14. A method of treating a malignant solid glioma in a human or animal using a multi-modality therapy comprising the steps of:

- (a) surgically excising cells of the solid glioma;
- (b) genetically modifying said excised cells to enhance the immunogenicity of said genetically modified cells;
- (c) altering the genetically modified cells to render the altered cells incapable of sustained clonogenic propagation;
- (d) subjecting the solid glioma to LINAC radiation therapy while limiting the radiation dose received concomitantly by contiguous normal tissue to clinically tolerable levels; and
- (e) subjecting said human or animal to an immunotherapy composed of introduction of said altered cells into said human or animal using multiple sequenced injections.

15. A method of treating a malignant solid glioma in a human or animal using a multi-modality therapy comprising the steps of:

- (a) surgically excising cells of the solid glioma;
- (b) genetically modifying said excised cells to enhance the immunogenicity of said genetically modified cells;
- (c) altering the genetically modified cells to render the altered cells incapable of unlimited clonogenic propagation;
- (d) subjecting the solid glioma to LINAC radiation therapy while limiting the radiation dose

received concomitantly by contiguous normal tissue to clinically tolerable levels; and

- (e) subjecting said human or animal to an immunotherapy composed of introduction of said altered cells into said human or animal using multiple sequenced injections.

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